

REGULATIONS OF THE POSTGRADUATE PROGRAM IN SPACE GEOPHYSICS

TITLE I

OBJECTIVES AND PURPOSES

Art. 1° The Postgraduate Program in Space Geophysics offers Master's and Doctorate courses in the areas of concentration of (i) Solar-Terrestrial Environmental Science, (ii) Atmospheric Sciences, both academic, aiming at the training of already graduated personnel, preferably in the areas of natural sciences and engineering, to work in the areas of teaching, research and their applications in universities, research institutes, companies and related institutions, in matters involving the development of space research or, even, arising from direct knowledge of related science or technology.

Sole paragraph – The Postgraduate Program (PPG) in Space Geophysics, from now on referred to as PGGES, will be governed by the INPE Postgraduate Programs Regulations (RPPG), according to Ordinance No. 448/2021/SEI-INPE, and by these Regulations.

TITLE II

OF THE PPG COUNCIL

Art. 2° In accordance with the provisions of Article 9° of the RPPG, the Council of the Postgraduate Program in Space Geophysics (CPGES) is composed of:

I - 1 (one) President, the Academic Coordinator, and 5 (five) Permanent Faculty representatives of the PPG, chosen by the respective Faculty, by direct vote. The Academic Coordinator and the Permanent Faculty representatives may be reappointed up to 3 (three) times in succession.

II - 1 (one) full representative and 1 (one) alternate of the Student Body, regularly enrolled in the PPG, chosen by the respective Student Body, by direct vote.

Sole paragraph - All full members of the CPGES have the right to vote. The President has a personal vote. In an equal-vote case, the President's vote will be decisive.

Art. 3° In addition to the provisions of Article 10 of the RPPG, the CPGES is responsible for:

I – defining the PPG calendar regarding the dates of the Dissertation and Thesis Proposal Examinations, Academic Activity Plan, Qualification Examination, Dissertation and Thesis Defenses, in compliance with the provisions of Articles 28, 33, 31, 32, 29, and 34 of the RPPG, respectively;

II – specifying, modifying, and adapting, if necessary, the PPG's internal rules, to be followed by the PPG's Faculty and Students, and with the approval of the INPE's Graduate Council (CPG).

III – monitoring the professors to ensure high-level, safe, and continuous guidance of the PPG students;

IV – forwarding, when requested, data and information that allow the PPG's evaluation;

V – monitor the administration of resources allocated to the PPG;

VI – represent the PPG in events related to Postgraduate Studies;

VII – be responsible for the broad dissemination of the PPG.

Sole paragraph – The CPGES meets with a minimum quorum of 2/3 of its representatives, whenever necessary, or upon convening by its President or upon request of at least 1 (one) member of the PPG Faculty.

Art. 4º It is the responsibility of the President of the CPGES, who also serves as Academic Coordinator, in addition to what is provided for in Article 11 of the RPPG:

I – monitor the performance of the members of the Faculty and Student Bodies to maintain a high standard of teaching and research;

II – coordinate the formation of Examining Boards, in all its instances, for subsequent approval by the CPGES;

III – chair the “ad hoc” Committees responsible for approving the Academic Activities Plan for candidates for the title of Doctor and Master in the Program;

IV – ensure compliance with these Bylaws, as well as the RPPG;

V – manage resources allocated to the PPG.

TITLE III

FACULTY

Art. 5 The Permanent Faculty of the PPG is composed of Doctors accredited by the CPGES, who meet the provisions of Article 6 of these Bylaws, Article 12 of the RPPG, and the current CAPES criteria.

Sole paragraph - Doctors approved by the CPGES and who meet the criteria established by CAPES for these two teaching categories may be part of the Faculty, as Collaborating or Visiting Professors. The accreditation and de-accreditation actions of non-active INPE employees must be formalized through a memorandum sent by the Academic Coordinator of the Program to the Teaching, Research, and Extension Coordination (COEPE), via the Electronic Information System (SEI).

Art. 6 Rules for admission and permanence in the Faculty.

§ 1º To be part of the Faculty, the interested party must comply with the standards of competence contained in Article 13 of the RPPG, and also:

a) Be responsible for and teach courses listed in the Program catalog, as well as evaluate, in compliance with the academic calendar, the students enrolled in courses under their responsibility;

b) Supervise Thesis and Dissertation work, ensuring the quality of the work generated by the students;

c) Examine the resumes of new students and suggest admissions;

d) Participate in the organization or holding of events related to the PPG

§ 2° To remain on the Faculty, the interested party must, in addition to complying with the requirements of Paragraph 1 of this Article:

a) Have published in the last 5 (five) years at least 3 (three) scientific articles in a journal with a recognized impact factor (impact factor above 1.3).

§ 3° If the professor fails to comply with the rules for permanence and has ongoing supervision, he/she will be allowed to remain on the Faculty until the completion of the supervision, without, however, having the right to accept new supervision commitments as the main supervisor.

§ 4° Permanence on the Faculty is also conditioned on compliance with and respect for the deadlines established in the academic calendar as provided for in Article 13 and its subsections of the RPPG.

Art. 7° In addition to the standards of competence contained in Article 13 of the RPPG, the members of the Faculty are also responsible for:

I - suggesting to the CPGES criteria for the admission of students through a Selection Process to be published on the INPE website and dissertation through other electronic means;

II - ensuring the quality of the Thesis and Dissertation work of the supervised students;

III - proposing to the CPGES the offering of new mandatory or elective disciplines, meeting the general objectives of continuous updating and improvement of the PPG.

TITLE IV

ADMISSION TO THE PPG

Art. 8° By the provisions of Article 16° of the RPPG, the CPGES will deliberate on the admission of candidates to the program, after consulting the Faculty through the establishment of an Admissions Committee (CA), formed by 04 (four) professors, including the academic coordinator, chaired by the academic coordinator, and other professors indicated by the Council.

§ 1° The Selection/Admission Process will be defined by notice, which must be published on the INPE website, including the schedule and the result of the Process, and will consist of:

I - For the Master's Degree

a) evaluation by the CA of the documentation (Curriculum Lattes, academic transcripts, and letters of recommendation) presented by the candidate for the master's degree (eliminary), evaluation of the student through a written exam in Physics and Mathematics (eliminary and qualifying) and an interview conducted by the CA (qualifying).

II - For the Doctorate

a) evaluation by the CA of the documentation (Curriculum Lattes, academic transcripts, letters of recommendation) presented by the doctorate candidate (eliminatory), letter of interest describing his/her motivation for the area, previous research experiences and which topic he/she would like to work on during the Doctorate (qualifying), evaluation of the student through a written exam in Physics and Mathematics identical to the student selection exam for the Master's degree (eliminatory and qualifying) and, through a seminar presentation to the CA, including the student's potential advisor (qualifying).

Sole paragraph - Students with a Master's degree obtained in the GES Program may use the score of the exam taken to enter the Master's degree and be exempted from taking a new exam to enter the Doctorate.

b) The scoring criteria in each of the stages and for ranking the candidates, as well as the deadlines for contesting the results will be defined by the CA and approved by the CPGES and published on the INPE website before the registration period.

c) Once item a has been met, and if the number of candidates applying for scholarships exceeds the number of scholarships available, they will be considered in order of classification.

d) For admission to the Doctorate without a Master's Degree, for candidates already enrolled in the Master's in GES, the student must have an overall grade equal to or higher than A- (read as A minus) from the 3rd academic period onwards.

§ 2º The admission of candidates will be in view of the pursuit of excellence of the PPG.

§ 3º The selection process for admission to the Master's and Doctorate courses of PGES occurs (3) three times a year. Except in exceptional cases to be defined by the Program Council.

TITLE V

PPG ACTIVITIES

Art. 9º The activities of the PPG have the same nature as those outlined in Article 17 of the RPPG.

§ 1º The curricular structure of the PPG consists of mandatory and elective disciplines, according to the PPG Annual Catalog.

§ 2º Each discipline may have (2) two Professors responsible for the course, who may, at their discretion, invite other professors who may teach classes during the academic period.

§ 3º Each student admitted to the Postgraduate Program in Space Geophysics will have 1 (one) or 2 (two) research advisors, approved by the PGGES Council, after hearing the student and the advisor(s), except in the case mentioned in Paragraph 4 of this Article.

§ 4° In exceptional cases, only for Doctoral work, after analysis by the PGGES Board, 3 (three) advisors may be admitted, with the 3rd advisor having professional ties to the foreign institution.

§ 5° If for any reason the student is left without a Research Advisor, the PGGES Coordinator will act as the student's Academic Advisor until a new Research Advisor is assigned.

§ 6° - The PGGES Board may appoint individuals from outside the PGGES Faculty, holders of a Doctorate Degree with experience in guidance and research, as long as they are supervised by a Professor from the Program.

TITLE VI

REQUIREMENTS FOR A MASTER'S DEGREE

Art. 10° To obtain the title of Master in Space Geophysics, all the requirements outlined in Article 36, item I, of the RPPG must be met.

Sole paragraph – The maximum term established by the PPG for the defense of the Master's degree is 36 months.

Art. 11° Of the total of 24 (twenty-four) credits in subjects required for the Master's degree, 16 (sixteen) credits must be obtained in mandatory subjects according to the PPG subject catalog.

Sole paragraph – Students must attend the seminars promoted by the PGGES, with a minimum of 20 (twenty) being mandatory.

Art. 12° Master's degree students must submit to a Dissertation Proposal Exam, by the provisions of Article 28 of the RPPG. This exam must be taken by the end of the 4th academic period.

§ 1° The Examining Board for the Dissertation Proposal Exam must be constituted by Paragraph 2 of Article 28 of the RPPG.

§ 2° The Dissertation Proposal Exam must be scheduled with the INPE Graduate Service (SEPGR) at least 14 (fourteen) days before the Exam date. To do so, the student must request the PPG Coordinator, at least 30 (thirty) days before the Exam date, to appoint the Examining Board and schedule the Exam, by sending (by email) a duly completed memo provided by SEPGR.

§ 3° The Dissertation Proposal document must be sent to the Examining Board at least 20 (twenty) days before the Proposal Exam date or as otherwise determined by the same.

§ 4° The Examining Board will meet with the student, in person or remotely, on the Exam date, to verify the aspects, quality, and feasibility of the Dissertation Proposal and the candidate's skills to carry out the research within the timeframe stipulated by the PPG Bylaws.

§ 5° The Examining Board will express the result of the evaluation through the concepts P (Approved) or D (Failed).

§ 6° Students who fail the Dissertation Proposal Exam will have one additional opportunity to take it up to 60 (sixty) days after the first exam; if they fail this second opportunity, the student will be dismissed from the PPG.

Art. 13° Master's students must demonstrate proficiency in the English language, by the provisions of Article 27 of the RPPG.

Sole paragraph - Proficiency in the English language will be demonstrated through an assessment to be defined by the PGGES Board. Students who present TOEFL, IELTS, or Cambridge proficiency certificates at a level to be defined by the Program Board will be considered approved. Candidates who have resided in a country where English is the official language for more than 1 year will be exempt from the exam.

Art. 14. Master's students must present at least (1) one seminar in the Space Geophysics I Seminar Discipline, or in the Space Geophysics Academic Week, and may participate in the organizing committee of this event.

Art. 15. Master's students must defend a Dissertation, by the provisions of Article 29 of the RPPG.

§ 1. The Examining Board for the Final Dissertation Defense must be constituted by Paragraph 2 of Article 29 of the RPPG.

§ 2. The Final Dissertation Defense must be scheduled with SEPGR at least 14 (fourteen) days before the Defense date. To do so, the student must request the PPG Coordinator, at least 60 (sixty) days before the Defense date, to appoint the Examining Board and schedule the Defense date, by sending (by email) a duly completed memorandum provided by SEPGR.

§ 3° The Final Dissertation Document must be sent to the Examining Board, as determined in advance by the Board.

TITLE VII

REQUIREMENTS FOR THE DEGREE OF DOCTOR

Art. 16° To obtain the title of Doctor in Space Geophysics, all the requirements outlined in Article 36, section II, of the RPPG must be met.

Sole paragraph – The maximum period established by the PPG for the defense of a Doctorate is 60 months.

Art. 17° Every Doctorate student, together with his/her advisor, must present an Academic Activities Plan, which corresponds to a general plan of studies and work with a minimum of 8 (eight) credits in subjects, by the provisions of Paragraph 1 of Article 31 of the RPPG. The maximum period established by the PPG for the preparation and approval of the Activities Plan is until the end of the 1st academic period.

§ 1° The Activities Plan will be evaluated by an "ad hoc" Committee appointed by the PGGES Council, chaired by its Academic Coordinator, and composed of at least 2 (two) other professors from the Program.

§ 2° If there is a relevant reason, in the judgment of the Academic Coordinator, the student, and his/her advisor may request a review of the Activity Plan, which must be approved by an "ad hoc" Committee established by the caput of this Article.

Art. 18° Every Doctoral student must take the courses listed in the Annual Catalog of the PPG included in his/her Academic Activity Plan, develop the activities provided for in Title IX of the RPPG, and other activities specified in his/her Academic Activity Plan.

Art. 19° Doctoral students must submit to a Qualifying Exam, by the provisions of Article 32 of the RPPG. This exam must be taken in the academic period following the last period for obtaining the necessary credits in courses listed in the Academic Activity Plan, and the deadline for its completion may not exceed the 6th academic period of the Doctoral course.

§ 1° The Examining Board for the Qualification Exam shall be constituted in accordance with Paragraph 2 of Article 32 of the RPPG. The Board shall be formed by a member of the PGGES Council, as president, and at least 2 (two) other faculty members, with the participation of research advisors not permitted;

§ 2° The Doctoral Qualification Exam shall consist of a written part and an oral part, covering 2 (two) relevant topics consistent with the Academic Activities Plan.

§ 3° Depending on the area of concentration for admission, the following Topics may be required in the Qualification Exam, even if the student has taken these subjects during the Master's degree: Space Geophysics, Atmospheric Physics, Solar-Terrestrial Physics, Space Geophysics Instrumentation.

§ 4° The Doctoral Qualification Exam will consist of the following stages:

- a) After the Examining Board has been appointed, the student will be notified of the 2 (two) topics selected by the Examining Board, covering academic and research subjects in Space Geophysics;
- b) The student must, 4 (four) weeks after the notification, submit to the Examining Board 2 (two) written monographs, one on each topic, containing 10 (ten) to 20 (twenty) pages of text per monograph;
- c) After 2 (two) weeks of submitting the monographs to the Examining Board, in a session not open to the public, make an oral presentation followed by discussion by the Examining Board;
- d) The result of the Doctoral Qualification Exam is expressed by the following grades: P - Approved D - Failed.

§ 5° Students who fail the Qualifying Exam will be entitled to one more opportunity, the criteria for which will be established by the PGGES Council, after consulting the Examining Board, and a new Exam must be completed within 60 (sixty) days after the first Exam.

§ 6° The Qualifying Exam must be scheduled with the SEPGR at least 14 (fourteen) days before the defense. To do so, the student must send the memorandum, duly completed according to the model provided by the SEPGR, to the PPG Coordinator at least 30 (thirty) days in advance.

Art. 20° Doctoral students must submit a Thesis Proposal Exam, by the provisions of Article 33 of the RPPG. This exam must be taken by the end of the academic term following the Qualifying Exam.

§ 1° The Examining Board for the Thesis Proposal Exam must be constituted by Paragraph 2 of Article 33 of the RPPG.

§ 2° The Thesis Proposal Exam must be scheduled with the SEPGR at least 14 (fourteen) days in advance of the Exam. To do so, the student must request the PPG Coordinator, at least 30 (thirty) days in advance of the Proposal Exam date, to appoint the Examining Board and schedule the Defense date, by sending (by email) a duly completed memorandum made available by the SEPGR.

§ 3° The Thesis Proposal Document must be sent to the Examining Board in the period determined by the same.

§ 4° The Examining Board will meet with the student, in person or remotely, on the date of the Exam to verify the quality, originality, and viability of the Thesis Proposal and the candidate's skills to carry out the research within the timeframe stipulated by the PPG Bylaws.

§ 5° The Examining Board will express the result of the evaluation through the grades P (Approved) or D (Failed).

§ 6° The student who fails the Thesis Proposal Exam will have a single additional opportunity to take it up to 60 (sixty) days after the first exam; in case of failure in this second opportunity, the student will be dismissed from the PPG.

Art. 21° Doctoral students must demonstrate proficiency in the English language, by the provisions of Article 30 of the RPPG.

§ 1° Proficiency in English will be demonstrated through an assessment to be defined by the PGGES Board. Students who present TOEFL, IELTS or Cambridge proficiency certificates at a level to be defined by the Program Board will be considered approved. Candidates who have resided in a country where English is the official language for more than 1 year will be exempt from the exam.

§ 2° Doctoral students who have completed a Master's degree at PGGES may be exempted from the exam by the "Ad Hoc" committee during the implementation of the Activity Plan.

Art. 22° Doctoral students must be involved in at least (1) one scientific article submitted for publication in an indexed journal with an impact factor above 1.3, preferably as the first author, to be eligible to apply for the Final Defense of the Doctoral Thesis.

Sole paragraph - the publication must be directly related to the theme of the student's thesis.

Art. 23 Doctoral students must present at least (1) one seminar in the Space Geophysics II Seminar Course, or in the Space Geophysics Academic Week, and may participate in the organizing committee of this event.

Art. 24 Doctoral students must defend a Thesis, by the provisions of Article 34 of the RPPG.

§ 1 The Examining Board for the Final Thesis Defense must be constituted by Paragraph 2 of Article 34 of the RPPG.

§ 2 The Final Thesis Defense must be scheduled with SEPGR at least 14 (fourteen) days before the Defense date. To do so, the student must request the PPG Coordinator, at least 60 (sixty) days before the Defense date, to appoint the Examining Board and schedule the Defense date, by sending (by email) a duly completed memorandum provided by SEPGR.

§ 3° The Final Thesis Document will be sent to the Examining Board at least 30 (thirty) days before the Final Defense date or as determined by the Board.

TITLE VIII

GENERAL AND TRANSITORY PROVISIONS

Art. 25° These Bylaws may be changed by law, by amendment of the RPPG, or by Article 3, item II, of these Bylaws.

Art. 26° Any student admitted before the entry into force of these Bylaws may declare their option for these Bylaws at any time after they enter into force, until the approval of a new Bylaw.

Art. 27° These Bylaws shall come into force on the date of their approval by the INPE Graduate Council.

Regulations translated from Portuguese into English, based on the regulations approved by the CPG on 01/02/2024.